

ARTICLES OF CONFEDERATION – The name of the instrument embodying the compact made between the Thirteen Original States prior to the adoption of the present constitution.

ASSESSMENT WORK – The annual labor or improvements which must be performed on a valid mining claim location in order for the claimant(s) to maintain a possessory right to the claim as against the United States or third parties. The statutory requirement (43 U.S.C. 28) is that \$100 worth of labor or improvements must be made annually on valid claims for which a patent has not been issued.

ASSIGNMENT INSTRUCTIONS – Written instructions to a cadastral surveyor authorizing him to execute a specific part, or all, of a particular survey. Even if the survey has been authorized, a surveyor may not execute it or any part of it without instructions containing his specific assignment. See SPECIAL INSTRUCTIONS.

ASTRONOMIC – Of or pertaining to astronomy. See ASTRONOMIC*, ASTRONOMIC LATITUDE*, ASTRONOMIC LONGITUDE*, ASTRONOMIC NORTH*, GEOGRAPHIC POSITION*.

ASTRONOMIC AZIMUTH – At the point of observation, the angle measured from the vertical plane through the celestial pole to the vertical plane through the observed object. Astronomic azimuth is the terrestrial azimuth which results directly from observations on a celestial body. It is measured in the plane of the horizon and is usually reckoned from south (0°), through west (90°), north (180°), and east (270°) back to south (360° or 0°). It is affected by the local deflection of the vertical (station error) which, in the United States, produces differences between astronomic and geodetic azimuths of as much as 26" in the mountain regions of the Western States and 10" in the less rugged Eastern States. Astronomic azimuths are sometimes reckoned clockwise or counterclockwise through 180°.

ATTEST – To affirm to be true or genuine. Specifically, to authenticate by signing as a witness; to establish or verify the usage of; to bear witness. See TESTIMONY.

AUTHORITY, PUBLIC LANDS – Article IV Sec. 3, Clause 2 of the Constitution of the United States established the fundamental authority for public land and resource management upon the adoption of the Constitution in 1787. It states: "*Congress shall have the power to dispose of and make all needful rules and regulations respecting territory and property belonging to the United States...*" It has been held that this power of Congress is without limitation. See CADASTRAL SURVEY AUTHORITY.

AUTO SURVEYOR – Trade name for an Inertial Positioning System.

AUXILIARY GUIDE MERIDIAN – Where guide meridians have been placed at intervals exceeding the distance of 24 miles (under practice permissible prior to issuance of the *1881 Manual of Surveying Instructions* which specified 24 mile tracts), and new governing lines are required, a new guide meridian is established, and a local name is assigned, such as "*Twelfth Auxiliary Guide Meridian West*," or "*Grass Valley Guide Meridian*." Auxiliary guide meridians are surveyed, in the same manner as guide meridians.

AUXILIARY MEANDER CORNER – An auxiliary meander corner is established at a suitable point on the meander line of a lake lying entirely within a quarter section or on the meander line of an island falling entirely within a section and which is found to be too small to subdivide. A line is run connecting the monument to a regular corner on the section boundary. See SPECIAL MEANDER CORNER.

AVULSION – A river's sudden change in flow alignment out from its previous left and right banks to a new channel, leaving an identifiable upland area between the abandoned channel and the new channel. The new flow alignment will generally be a shortcut in channel length because of hydraulic considerations. The U.S. Supreme Court in *Iowa v. Nebraska* 143 US 359 distinguished avulsion from rapid erosion, but some State courts have established different definitions. See *Goins v. Merryman* 183 Okla. 155. Frequently the elements of sudden and perceptible changes are included in the definitions. See ACCRETION, AVULSION*.

AVULSION, ARTIFICIAL – Man-made or man-induced changes in flow alignment of a river such as to leave an identifiable area of upland between the old and new channels.

AVULSIVE CUTOFF – A river's action when avulsion takes place; also, describes the area of land enclosed by the old and the new channels.

AZIMUTH – The horizontal direction reckoned clockwise from the meridian plane. See ASTRONOMIC AZIMUTH, GEODETIC AZIMUTH, GRID AZIMUTH.

B

BAL (Land Status Records) – Balance.

BDY; BDRS (Land Status Records) – Boundary, Boundaries.

BEN (Land Status Records) – Bentonite.

BH MER (Land Status Records) – Black Hills Meridian.

BIA (Land Status Records) – Bureau of Indian Affairs.

BIFC – Boise Interagency Fire Center.

BLK (Land Status Records) – Block.

BLM (Land Status Records) – Bureau of Land Management.

BLM-M (Land Status Records) – Bureau of Land Management Manual.

BM (Land Status Records) – Bench Mark.

BM – Erroneously for Boise Meridian.

BO – Bearing Object.

BOISE MER (Land Status Records) – Boise Meridian.

BR – Bearing rock. An obsolete corner marking for a bearing object used on mineral surveys.

BR (Land Status Records) – Bureau of Reclamation.

BSFW (Land Status Records) – Bureau of Sports, Fisheries and Wildlife. Now, 1976, U.S. Fish and Wildlife Services, 1976.

BT – Bearing Tree.

BACK AZIMUTH – See GEODETIC AZIMUTH.

BACK BEARING – The bearing at the opposite end of a line from the observer as measured from the true meridian at the opposite end of the line. The back bearing on all lines (other than North-South lines) are different from the bearing at the observer's station. They differ by the amount of convergency of the meridians between the two points.

BACKSHORE (T.R. No. 4) – That zone of the shore or beach lying between the foreshore and the coastline and acted upon by waves only during severe storms, especially when combined with exceptionally high water. See BEACH, SHORE, FORESHORE, COASTLINE.

BACKSIGHT – A sight on a previously established survey point. See BACKSIGHT*.

BANK – The continuous margin along a river or stream where all upland vegetation ceases. See RIGHT BANK, LEFT BANK, BEDS OF NON-NAVIGABLE LAKES AND STREAMS.

BANKHEAD-JONES LANDS – Under Title III of the Bankhead-Jones Farm Tenant Act, of July 22, 1937, the Department of Agriculture was authorized to purchase submarginal farm lands in the Great Plains region for purposes of reclamation, conservation, etc. Approximately 2 million acres were acquired and are termed "*Bankhead-Jones Lands*." These lands are now under the administration of the Bureau of Land Management, are in the class of Federal lands called "*acquired lands*" and are not subject to entry or disposal under the general public land laws. See ACQUIRED LANDS.

BARGAIN AND SALE – In conveyancing, the transferring of property from one to another, upon valuable consideration, by way of sale. A "*bargain and sale*" deed usually means one which carries no warranty. See DEED, WARRANTY and PATENT.

BARK SCRIBE – To bark scribe a tree monument or bearing tree is to lightly cut the appropriate marks into the bark of the tree without blazing. In the case of certain smooth and thin barked trees, marks thus made will last as long as the tree remains sound. See BLAZE.

BASE LANDS – In a lieu selection or exchange, the lands to which the applicant relinquishes his rights as a basis for his selection. See LIEU SELECTION.

BASELINE – A line fixed by sovereigns along their coasts which is fundamental toward determining the seaward extent of the boundaries. See RULE OF TIDEMARK, STRAIGHT BASELINE.

BASE LINE – A line which is extended east and west on a parallel of latitude from an initial point, and from which are initiated other lines for the Cadastral Survey of the public lands within the area covered by the principal meridian that runs through the same initial point. See BASE LINE*, BASIS PARALLEL.

BASE PLAT – A drawing containing only those details essential to the identification of the legal subdivisions shown on it. Under the manuals of surveying instruction preceding that of 1930, the base plat also contained all cultural and topographic features thought to be desirable. The *1930 and 1947 Manuals of Surveying Instructions* called for the use of transparent color overlays to show these features when required. Overprints are not needed where such features may be readily shown on the base drawing without risk of obscuring any essential cadastral data. Color overlays have been used with base plats of areas surveyed by photogrammetric methods.

BASIN – The entire area drained by a main stream and its tributaries.

BASIS PARALLEL – The Base Line, as termed in early surveys.

BATTURE – A marine term, used to denote a bottom of sand, stone or rock mixed together and rising towards the surface of the water; but it is sometimes used to signify the island formed when it has risen above the surface of ordinary high water. Batture differs from alluvium in that batture is the addition of soil to the bed of a stream or lake, while alluvium is an addition to the shores. Hence by reason of such fact the ownership thereof is determined

largely along a different line. Both “*batture*” and alluvium are often referred to as “*accretions*.” Technically however, the term “*accretion*” refers to the legal result occurring from the effect of the deposit of alluvium and batture.

BAYOU*.

BEACH (T.R. No. 4) – The zone of unconsolidated material that extends landward from the low water line to the place where there is marked change in material or physiographic form or to the line of permanent vegetation (usually the effective limit of storm waves). The seaward limit of the beach – unless otherwise specified – is the mean low water line. A beach includes foreshore and backshore. (Refer to Figure 1). See SHORE, FORESHORE, BACKSHORE, TIDELANDS.

BEARING – The horizontal angle which a line makes with the meridian of reference adjacent to the quadrant in which the line lies. Bearings are classified according to the meridian of reference, as: astronomic, geodetic, magnetic, grid, assumed, etc. When no reference is specified on a plat or in a document, astronomic meridian is presumed. A bearing is identified by naming the end of the meridian from which it is reckoned, either north or south, and the direction of that reckoning, either east or west. Thus, a line in the northeast quadrant making an angle of 50° from the reference meridian will have a bearing of N. 50° E.

BEARING OBJECT – A corner accessory which may be a natural object that can be readily identified by its distance and direction from the corner being recorded. These objects may not be of a character that can be marked, but in the case of a rock cliff or boulder a cross mark and the letters “BO” will be chiseled into the bearing object. The record should be clear enough to enable another surveyor to determine just where the marks will be found. The rock bearing object is the most permanent of all accessories; it is used wherever practicable, and within a distance of 5 chains. a connection to any permanent artificial object or improvement may be included in this general class of corner accessories. The field notes should be explicit in describing such objects, and indicate the exact point to which a connection is made, as “*pipe of Smith’s windmill.*” No marks are made on private property. See BEARING TREE, MOUND AND PITS, LAND MARK, ACCESSORIES, CORNER.

BEARING TREE – A marked tree used as a corner accessory; its distance and direction from the corner being recorded. Bearing trees are identified by prescribed marks cut into their trunks; the species and sizes of the trees are also recorded.

BED – In mining, a stratum in the earth’s crust which has been formed in an approximately horizontal layer. If of rock, it is termed “*bedrock.*” Also See BEDS OF NONNAVIGABLE LAKES AND STREAMS.

BEDS OF NONNAVIGABLE LAKES AND STREAMS – The areas within the mean high-water lines of a lake, stream or river which are kept practically bare of vegetation from year to year by the wash of the waters; although parts of them are left dry for months at a time. Title to the beds of nonnavigable bodies of water remains in the United States until the shore lands have passed into private ownership. See PROTRACTION, RIPARIAN BOUNDARIES and PARTITION LINES.

BLACK HILLS MERIDIAN – The principal meridian governing surveys in the western part of South Dakota, it was established in 1878.

BLANK LINE – 1) Where bearings and distances are shown, for information purposes only, across areas not then subject to survey. 2) In *Manual of Surveying Instructions 1834*, “thence north on a blank line; ...” appears used as a random line in specimen field notes.

BLAZE – A mark made upon a tree trunk usually at about breast height. The bark and a small amount of the live wood are removed with an axe or other cutting tool, leaving a flat, smoothed surface which forever brands the tree. On rough-barked tree monuments or bearing trees the appropriate marks are scribed into a smooth, narrow, vertical blaze the lower end of which is about 6 inches above the root crown. The blaze should be just long enough to allow the markings to be made. See OVERGROWTH.

BLAZED LINE – A sufficient number of trees differing from line trees in that they stand within 50 links of and on either side of the line, rather than being intersected by it, are blazed on two sides quartering toward the line. This is done to make the survey line more conspicuous and readily traced in either direction. The blazes are made opposite each other coinciding in direction with the line where the trees stand very near it. They are made closer to each other, toward the line, the farther they are from the line. R.S. sec. 2395; 43 U.S.C. 751 is the law authorizing the marking of trees along surveyed lines, and its requirements are as positive in this matter as are those requiring the erection of monuments. See LINE TREE.

BLOCK – A subdivision of a town site.

BOARD OF LAND APPEALS – Under the direction of a Board Chairman, the board exercises jurisdiction over cases involving appeals from decisions rendered by departmental officials relating to the use and disposition of public lands and their resources and the use and disposition of mineral resources in certain acquired lands and in the submerged lands of the Outer Continental Shelf. Persons adversely affected by a decision of a BLM officer or

examiner have the right to appeal to the board. The Board is in the Office of Hearings and Appeals, the office of the Secretary of the Department of the Interior, as provided at 35 F.R. 10010, June 18, 1970 – 43 C.F.R. 1842.2 (Now 43 C.F.R. part 4). Decisions of the Board on such appeals shall be final for the Department.

BOG – A shallow, low-lying, virtually undrained body of water, where partially decayed vegetation accumulates on the bottom and on the surface to form a mat. Mosses, sedges, grasslike plants and small shrubs eventually take root in the surface mat forming a “*boggy*” or spongy form of ground. In an advanced stage the water area becomes completely filled and may become what is known as a “*peat bog*.” See MARSH and SWAMP.

BOISE MERIDIAN – The principal meridian governing surveys in Idaho; it was established in 1867.

BONA FIDE – In or with good faith; honestly, openly and sincerely. Without deceit or fraud. Actual and genuine.

BONA FIDE RIGHTS – Rights, such as in ownership of land, which are real, actual, genuine and worthy of acceptance. Rights acquired in good faith under the law.

BOUNDARIES, NATIONAL – Boundaries between countries are established by treaties made by the sovereign powers concerned.

BOUNDARIES, STATE – A boundary between two States of the United States may be changed by agreement of the State legislatures, but this agreement must be approved by Congress. The United States Congress cannot change a State boundary without the consent of the State, nor can two States by mutual agreement change their common boundary without the consent of Congress. The consent of Congress to change a boundary need not be granted by a special act but may be inferred from subsequent legislation. Several times Congress has given its consent in advance for adjoining States to fix an indefinite water boundary between them. A boundary between a State and a territory is fixed by joint action of Congress and the State. Boundaries between territories are fixed by congressional action alone. Disputes between States regarding boundaries must be settled by the United States Supreme Court, whose decisions are final. It is a well-established principle, recognized by the courts and by Congress, that a State or national boundary line as marked on the ground and accepted by the parties interested is the legal boundary for all purposes whether or not it is the place designated by statute. Nearly all boundaries of States west of the Mississippi, as well as those of many central and southern States, were surveyed under the direction of the General Land Office. Notes of all such surveys, and plats for most of them, are now on file in the Bureau of Land Management, Dept. of Interior, or in the Cartographic Records Div., National Archives and Records Service, Washington, D.C.

BOUNDARY, LAND – A line of demarcation between adjoining parcels of land. The parcels of land may be of the same or of different ownership, but distinguished at some time in the history of their descent by separate legal descriptions. A land boundary may be marked on the ground by material monuments placed primarily for the purpose; by fences, roads, and other service structures along the line – or defined by astronomically described points and lines.

BOUNDARY LINE – A line along which two areas meet. A boundary line between privately owned parcels of land is usually termed a property line. If a boundary is a line of the United States public land surveys, it is given a particular designation, such as section line or township line.

BOUNDARY MONUMENT – A material object placed on or near a boundary line to preserve and identify the location of the boundary line on the ground.

BOUNTY LANDS – Portions of the public domain given or donated as a bounty for services rendered, chiefly for military service. See 43 U.S.C.A., sec. 791.

BROKEN BOUNDARY – 1) A boundary of the rectangular system which is a series of line segments representing a boundary which is not a straight line. 2) A boundary consisting of straight line segments which is not part of the rectangular system.

BROKEN BOUNDARY ADJUSTMENT – A general term which indicates a distribution of a closing error. Included are: (1) A mathematical adjustment applied to record meander courses which have since become nonriparian; is identical to the compass rule. (2) A mathematical adjustment applied to the record courses of a grant or reservation boundary; it is a rotation and scale change that will retain the original angles and change the lengths of each line segment proportionately according to the record. See GRANT BOUNDARY, IRREGULAR BOUNDARY, NON RIPARIAN BROKEN BOUNDARY ADJUSTMENT, ADJUSTMENT*.

BUREAU OF LAND MANAGEMENT, THE – An agency of the Department of the Interior, it was created July 16, 1946, pursuant to Presidential Reorganization Plan No. 3 of 1946, which consolidated the functions and activities of the General Land Office and the Grazing Service.

C

CA (Land Status Records) – Communitization Agreement.

CA – California.